CLAIM AMENDMENTS

1-26 (cancelled)

27. (new) A suspension smelting furnace installation comprising:

a suspension smelting furnace defining a vertical reaction shaft for roasting and smelting dried concentrates in suspension, the reaction shaft having a top level,

a concentrate burner mounted on top of the reaction shaft, the concentrate burner being a sleeve type burner or a diffusion type burner,

a bin having an inlet for receiving a supply of fine-grained material and also having an outlet below the top level of the reaction shaft,

a feed control unit for receiving the fine-grained material from the outlet of the bin and providing the fine-grained material with accurately controlled feed rate, and

a pneumatic conveyor positioned to receive the fine-grained material from the feed control unit and adapted to transport the fine-grained material to the concentrate burner with a feed rate that equals the feed rate at which the fine-grained material is provided by the feed control unit.

28. (new) The installation of claim 27, wherein said bin for receiving fine-grained material is a first bin for receiving a dried mixture of metal concentrate and fluxing agent, the feed control unit for receiving the fine-grained material from the outlet of the bin is a first feed rate controller, the installation further comprises a second bin for receiving flue dust and a second feed rate controller for receiving the flue dust from the second bin and providing the flue dust with accurately controlled feed rate, and the pneumatic conveyor is positioned to receive both the dried mixture of metal concentrate and fluxing agent from the first feed rate controller and the flue dust from the second feed rate controller.

29. (new) The installation of claim 28, wherein the first and second feed rate controllers are, respectively, a first loss-in-weight controller and a second loss-in-weight controller.

30. (new) The installation of claim 27, wherein the pneumatic conveyor is a dilute-phase pneumatic conveyor.

31. (new) The installation of claim 27, wherein the pneumatic conveyor is a dense-phase pneumatic conveyor.

32. (new) The installation of claim 27, wherein the pneumatic conveyor is an air-lift type pneumatic conveyor and the air-lift conveyor is provided with an expansion vessel-adapted to feed the fine-grain material into the concentrate burner via an air-lock feeder and an air-slide conveyor.

33. (new) The installation of claim 27, wherein the feed control unit is a loss-in-weight controller and the pneumatic conveyor is a dilute-phase pneumatic conveyor.

34. (new) The installation of claim 27, wherein the feed control unit is a loss-in-weight controller and the pneumatic conveyor is an air-lift type pneumatic conveyor.

35. (new) A method of operating a suspension smelting furnace installation that comprises a suspension smelting furnace defining a vertical reaction shaft for roasting and smelting dried concentrates in suspension, a sleeve type or diffusion type concentrate burner mounted on top of the reaction shaft, and a bin having an inlet for receiving a supply of fine-grained material and also having an outlet below a top level of the reaction shaft, the method comprising:

feeding fine-grained material to the bin via the inlet thereof,

forming and maintaining in the bin a quantity of said fine-grained material corresponding with at least one hour's feed of the suspension smelting furnace;

employing a feed rate controller unit to feed the fine-grained material from the bin to a pneumatic conveyor, whereby the feed rate controller unit provides the pneumatic conveyor with an uninterrupted and controlled feed of the fine-grained material, and

employing the pneumatic conveyor to convey the fine-grained material to the concentrate burner.

36. (new) The method of claim 35, wherein the feed rate controller operates according to the principle of loss-in-weight controller.

37. (new) The method of claim 35, further comprising a step of feeding flue dust into the pneumatic conveyor.

38. (new) The method of claim 35, wherein the fine-grained material comprises metal concentrate.

39. (new) The method of claim 35, wherein the fine-grained material comprises metal concentrate and fluxing agent.

40. (new) The method of claim 35, wherein the fine-grained material comprises metal concentrate, fluxing agent and flue dust.

41. (new) The method of claim 35, wherein the installation comprises first and second bins and the method comprises:

feeding a dried mixture of metal concentrate and fluxing agent to the first bin and feeding flue dust to the second bin,

employing first and second feed rate controller units to feed material from the first and second bins respectively to the pneumatic conveyor, whereby the feed rate controller units provide the pneumatic conveyor with an uninterrupted and controlled feed of both the dried mixture of metal concentrate and fluxing agent and the flue dust, and

employing the pneumatic conveyor to convey the dried mixture of metal concentrate and fluxing agent and the flue dust to the concentrate burner.